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G4H HU H13D

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(58) Field of Search

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(54) Abstract Title

Implementing logic circuits

(57) A programmable monolithic integrated logic circuit includes look up table circuits and programmable logic array-like circuits. The integrated circuit can include a first number of the look up tables and a second number of the programmable logic array-like circuits and where the first and second numbers are related by a ratio of between 0.25:1 and 8:1, between 1:1 and 5:1, or about 4:1. The programmable logic array-like circuits can each include at least 10,000 or 50,000 equivalent two-input NAND gates and the look up tables and the programmable logic array-like circuits can each comprise static random access cells. A method of implementing a logic circuit includes reading a netlist that includes a plurality of subnets, determining the suitability of ones of the subnets to being implemented with look up tables and with programmable logic array-like circuits, and determining whether to implement each subnet with a look up table or a programmable logic array-like circuit based on results of the step of determining. Based on the steps of determining, the method implements a first subnet of the plurality of subnets with look up table circuits and a second subset of the plurality of subnets with programmable logic array-like circuits.

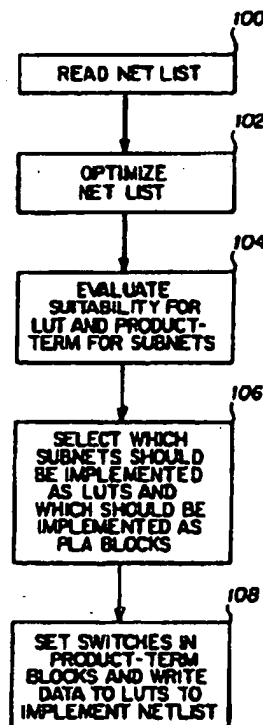
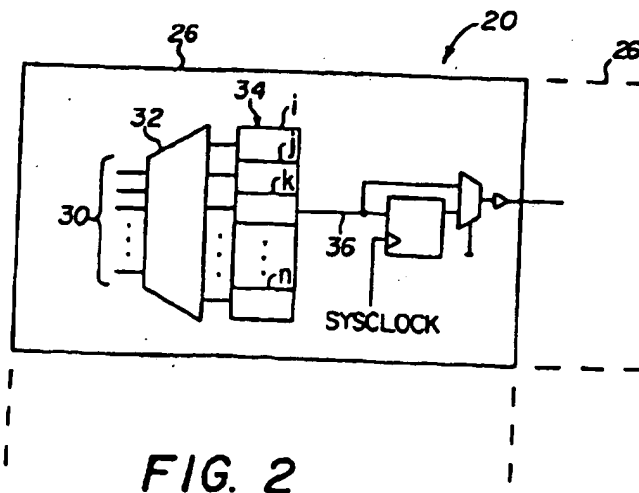
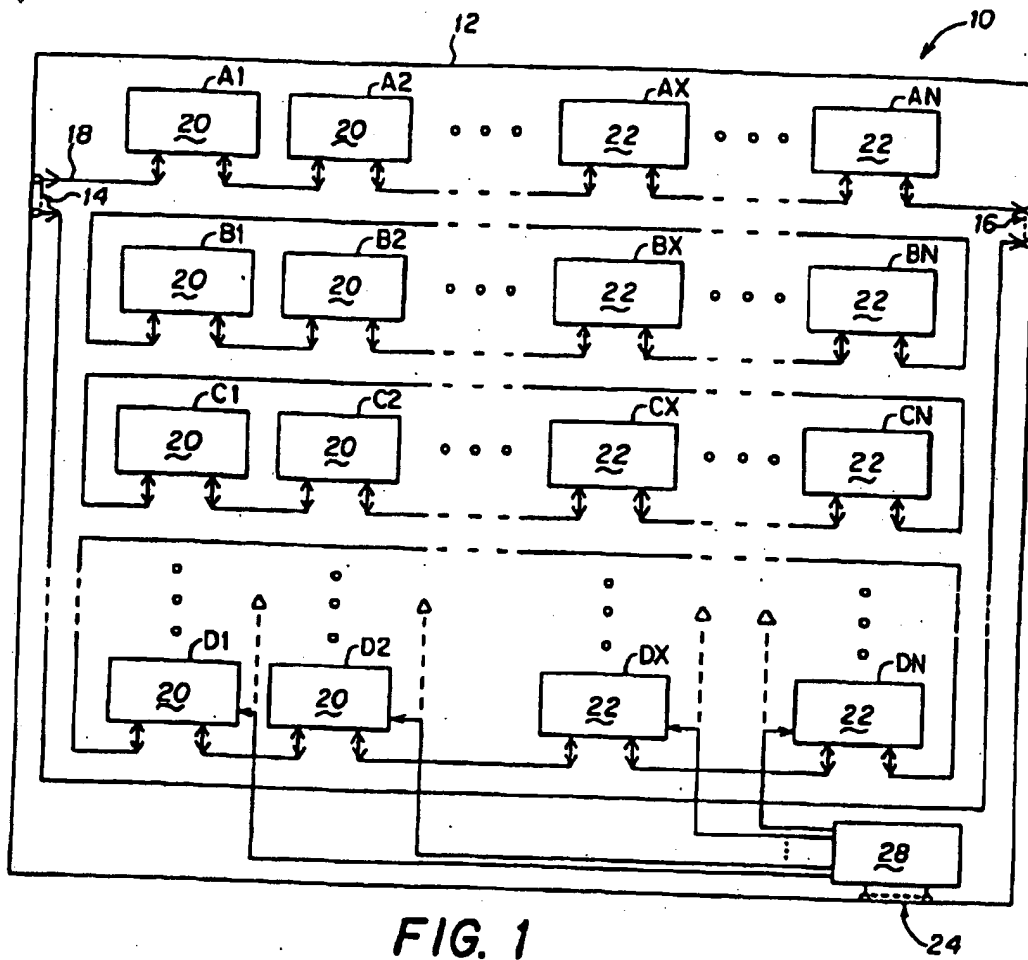


FIG. 6

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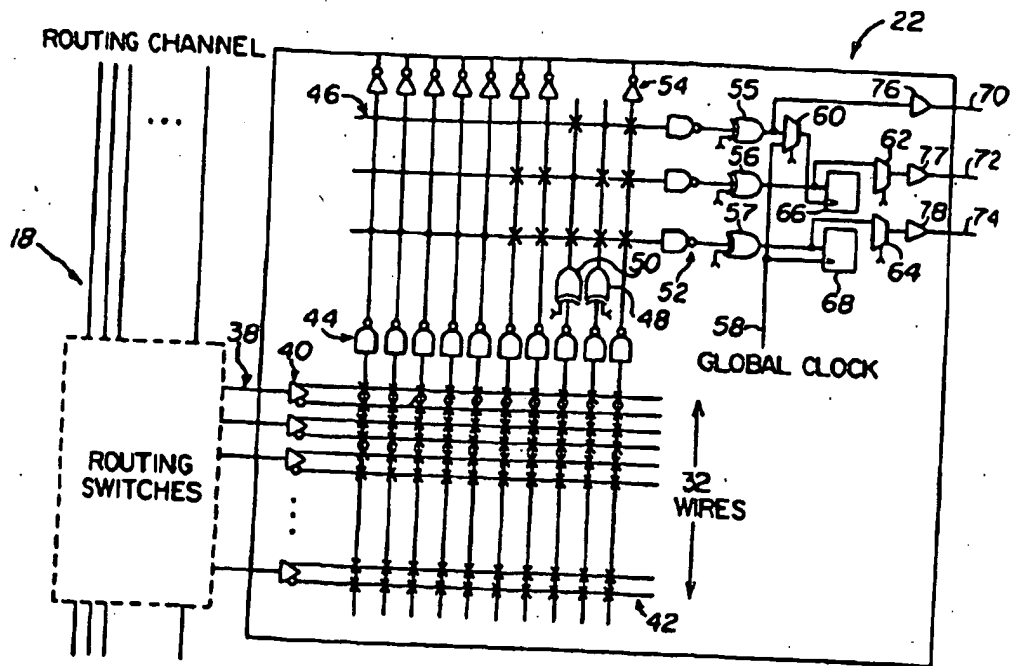


FIG. 3

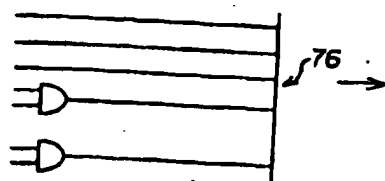


FIG. 4A

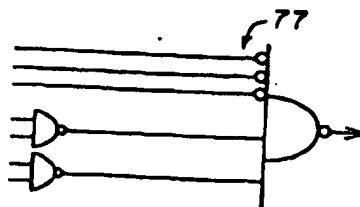


FIG. 4B

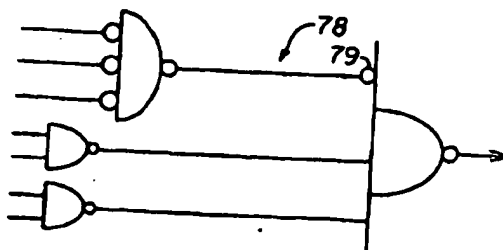


FIG. 4C

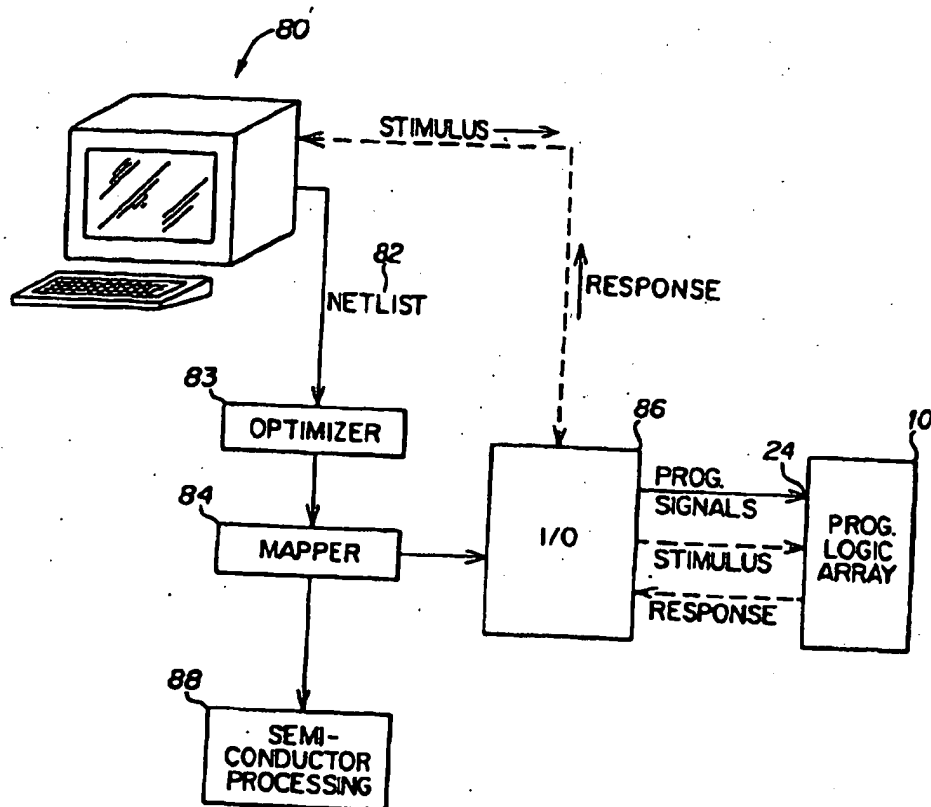


FIG. 5

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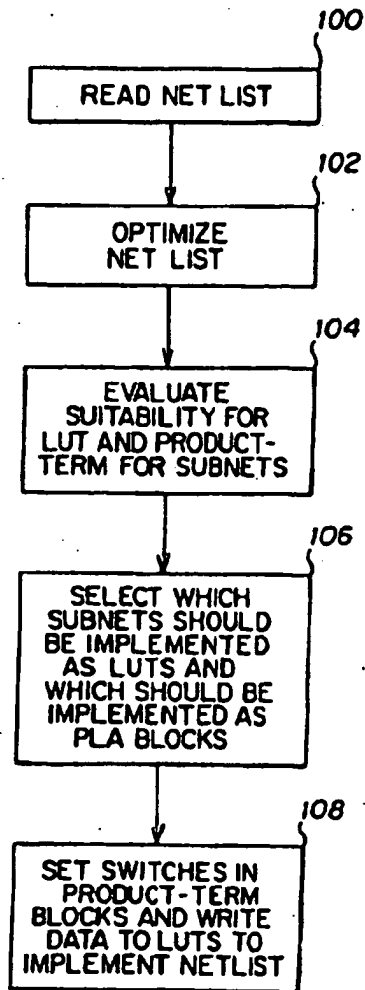


FIG. 6

Size

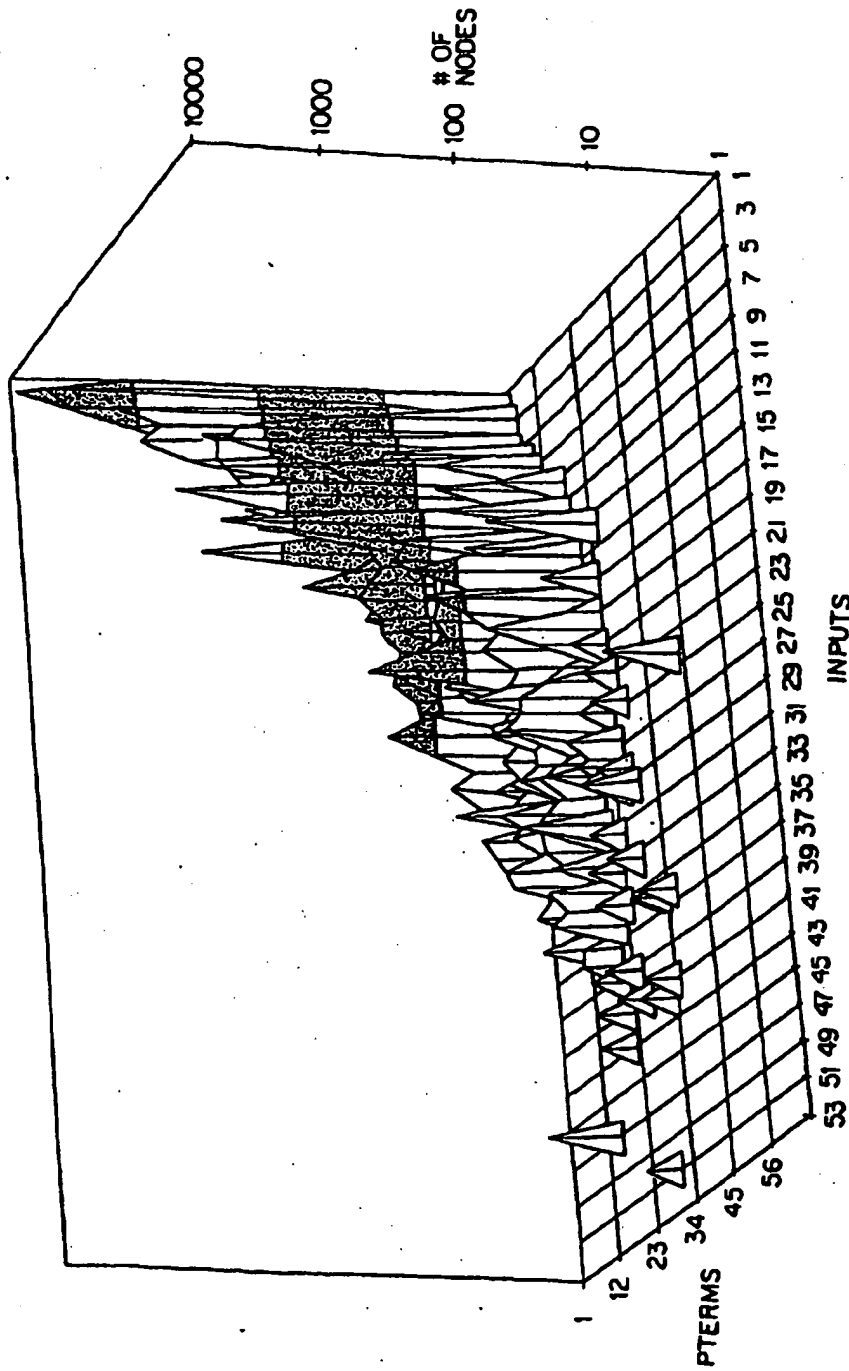


FIG. 7

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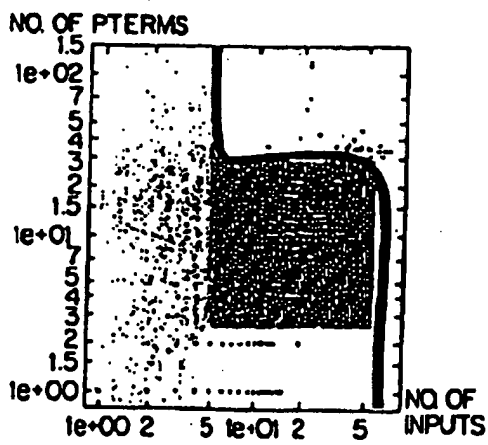


FIG. 8

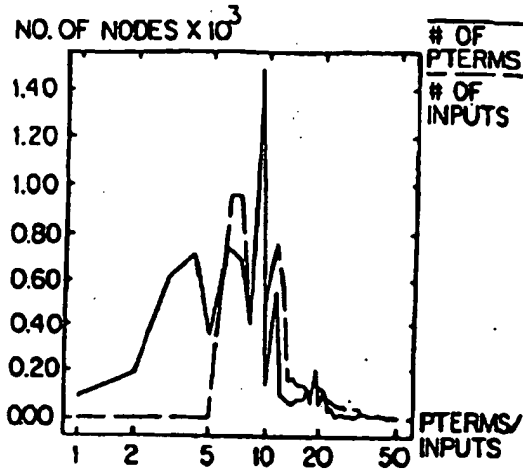


FIG. 9

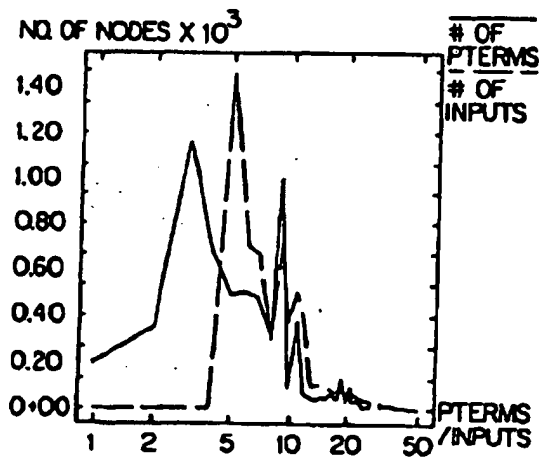


FIG. 10

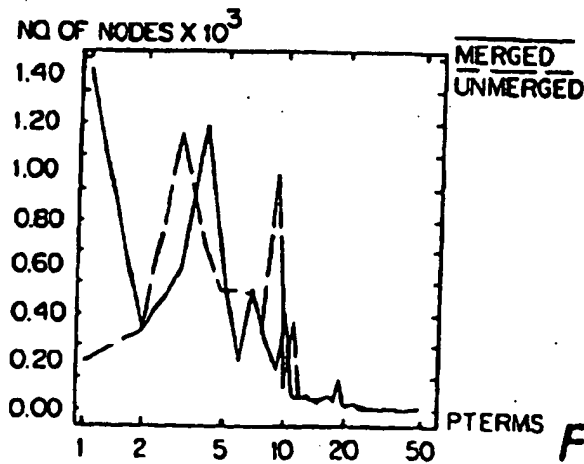


FIG. 11